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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER
WEINMAN, SEAN M

ART UNIT	PAPER NUMBER
2115	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *12/19/03 4/20/05*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claims 1-26 are presented for examination.

5   *Claim Objections*

Claim 9 is objected to because of the following informalities:

- *Claim 9* recites "the program clock frequency, and." In line 2 of the respective

   claim. It is believed that the period after and should be a comma and recited as

   "the program clock frequency, and," and will be treated as such for the remainder

10   of the office action.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

15   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
      subject matter that the applicant regards as his invention.

Claims 3 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

20   regards as the invention.

Claim 3 recites the limitation "a system frequency" in line 1 of the respective claim. It is

unclear whether this is intended to be the same as or different from the "system frequency"

recited in line 4 of claim 1.

Claim 6 recites the limitation "a program clock frequency" in line 1 of the respective

claim. It is unclear whether this is intended to be the same as or different from the "program

clock frequency" recited in line 2 of the claim 1. Additionally, claim 6 recites the limitation "a

system frequency" on line 2 of the respective claim. It is unclear whether this is intended to be

5   the same as or different from the "system frequency" recited in line 4 of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

10   A person shall be entitled to a patent unless –

             (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
             sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 8, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by

15   Itakura et al. (US Patent No. 6,493,832).

As per claim 1, Itakura et al. teach the claimed invention comprising:

sampling a program clock frequency at which information is sent over a communication

link *(Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52)*;

sampling a system frequency related to the communication link *(Col. 4 lines 50-63 and*

20   *Col. 6 lines 42-52)*;

computing a result based on the sampled program clock frequency and the sampled

system frequency *(Col. 4 lines 50-63 and Col. 6 lines 42-52)*; and

transmitting the result over the communication link *(Col. 4 lines 50-63 and Col. 6 lines*

42-52) .

As per claim 2, Itakura et al. teach the claimed invention comprising:

the sampling a sending frequency includes: sampling a value of a counter counting the

program clock frequency at a beginning and an end of a sampling interval *(Col. 6 lines 22-31*

and lines 42-52).

5   *As per claim 3*, Itakura et al. teach the claimed invention comprising:

the sampling a system frequency includes: sampling a value of a counter counting the

system frequency at a beginning and an end of a sampling interval *(Col. 6 lines 42-52)*.

As per claim 8, Itakura et al. teach the claimed invention comprising:

sampling a program clock frequency at which information received over a

10   communication link is played *(Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52)*;

sampling a system frequency related to the communication link; computing a first value

based on the sampled program clock frequency and the sampled system frequency *(Col. 4 lines*

50-63 and Col. 6 lines 42-52);

receiving a second value via the communication link *(Col. 6 lines 42-52)*; and

15   adjusting the program clock frequency based on the first value and the second value

(Abstract and Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52).

As per claim 13, Itakura et al. teach the claimed invention comprising:

the second value indicates a sending frequency at which the received information is

transmitted *(Col. 6 lines 42-52)*.

20

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5

Claims 4-7, 9-12, and 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable

10   over Itakura et al. (US Paten No. 6,493,832) in view of Kawabata et al. (US Patent Application

Publication 203/0018983).

As per claim 4 and 9, Itakura et al. teaches the claimed invention for all of the reasons

stated above. However, Itakura et al. does not explicitly teach calculating a different in the

program frequency and a difference in the system frequency. Specifically, Itakura et al. teaches

15   sampling a program clock frequency and a system frequency. Additionally, Itakura et al. teach

calculating a result based on the samplings and transmitting the result over the link and adjusting

the programs clock frequency by the calculation. Itakura et al. does not explicitly teach the

method of calculating a result based on the samplings.

Kawabata et al. teaches a data transmitting system that samples the program clock

20   frequency and system frequency and then calculates a result based on the samplings. Kawabata

et al. teach the claimed invention comprising calculating a first difference value related to the

program clock frequency, and calculating a second difference value related to the system

frequency *(Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and*

Itakura et al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24). In summary,

25   Kawabata et al. teach a system which calculates a difference in the program frequency and a

difference in the system frequency and then calculates a result of based on those samplings.

It would have been obvious to combine the teachings of Itakura et al. and Kawabata et al.

because they both teach data transmission methods that make use of the program clock frequency

an the network clock frequency to calculate synchronization signal for synchronizing the

transmission of the data to the reception side of the system. Kawabata et al. teaches the

5   deficiency of Irakura et al. by teaching the explicit method of sampling the program clock

frequency and system frequency and then calculating a result based on the samplings.

As per claim 5 and 10, Itakura et al. and Kawabata et al. teach the claimed invention

comprising:

dividing the first difference value by the second difference value to obtain the result

10   *(Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al.*

teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24).

As per claim 6, Itakura et al. teach the claimed invention comprising:

sampling a program clock frequency is triggered by the sampling a system frequency

(Col. 4 lines 50-63).

15   *As per claim 7*, Itakura et al. teach the claimed invention comprising:

synchronizing the system frequency with a system frequency of a remote device via the

communication link using a control protocol *(Col. 4 lines 50-63 and Col. 6 lines 42-52 Itakura et*

al. does not explicitly teach using control protocol to synchronize the system frequency but it

would have been obvious to one of ordinary art in the skill that control protocol is primarily

20   *used to synchronize the system frequency of a remote device.).*

the sampling a program clock frequency is triggered by the sampling a system frequency.

As per claim 11, Itakura et al. and Kawabata et al. teach the claimed invention

comprising:

generating a difference value from the first value and the second value, wherein the

adjusting adjusts the program clock frequency based on the difference value *(Kawabata et al.*

5   *teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al. teach the claimed*

invention in Col. 8 line 61 – Col. 10 lines 24).

As per claim 12, Itakura et al. teach the claimed invention comprising:

changing a control voltage to an oscillator based on the difference value, or changing a

numerical value to adjust a frequency of a local program clock oscillator, or changing a

10   frequency of a virtual clock if data re-sampling is used in lieu of program clock adjustment *(Col.*

4 lines 50-63 and Col. 6 lines 42-52 Ikatura et al. does not explicitly teach changing the numeric

frequency of the program clock oscillator but it would have been obvious to one of ordinary skill

in the art that changing the program clock oscillator would change the frequency of the program

frequency to correct lag.) .

15   *As per claim 14*, Itakura et al. teach the claimed invention comprising:

increasing the program clock frequency if the first value and the second value indicate

that the program clock frequency lags behind the sending frequency, and decreasing the program

clock frequency if the first value and the second value indicate that the sending frequency lags

behind the program clock frequency *(Col. 4 lines 50-63 and Col. 6 lines 42-52 Itakura does not*

20   *explicitly teach increasing or decreasing the program frequency to correct lag but it would have*

been obvious to one of ordinary skill in the art that increasing of decreasing the frequency of the

program frequency would correct a known frequency lag of the program clock frequency) .

As per claim 15, Itakura et al. and Kawabata et al. teach the claimed invention comprising:

re-sampling the information based on a difference between the first value and the second value *(Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and Itakura et*

5   *al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24).*

As per claims 16-26, it is directed at the device for sampling the program and system frequency and calculating a result to adjust the program frequency to synchronize the transmission of data. Since Itakura et al. and Kawabata et al. teach the claimed method, Itakura et al. and Kawabata et al. teach the claimed device to sample the program and system frequency

10   and calculate a result to adjust the program frequency to synchronize the transmission of data

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Weinman whose phone number is (571) 272-2744. The

15   examiner can normally be reached on Monday-Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (571) 272-3667. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent

20   Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sean Weinman
Examiner
Art Unit 2115

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CHUN CAO
PRIMARY EXAMINER